

Remarks/Arguments

Reconsideration of this application is requested.

Claim Status

Claims 1 and 2 are pending and amended.

Claim Rejections – 35 USC 112

The Action rejects claims 1 and 2 under 35 USC 112, second paragraph, as indefinite, and asserts that it is unclear what the “operating condition” and “abnormal condition” are associated with. In response, claim 1 is amended to clarify that these conditions are associated with the engine.

The Action also points out that certain terms lack antecedent basis. In response, claims 1 and 2 are amended as suggested to provide proper antecedent basis for all terms.

Claim Rejections – 35 USC 102

Claims 1 and 2 are rejected under 35 USC 102(b) as anticipated by Applicant's Admitted Prior Art (AAPA).

As described in applicant's specification, in a conventional self-diagnosis indication system, when an abnormality is detected at the time of engine startup (FIG. 2B, step S1) and a starter switch is switched on at the time of startup (step S2), a startup disablement indication is determined and implemented (step S3 and page 2, lines 2-9). However, since the startup disablement indication is determined using the on/off signals of the starter switch, the signal wiring is complex, resulting in higher costs (page 2, lines 10-13).

Applicant's invention solves this problem. According to applicant's invention, a startup disablement indication is determined when an abnormality is detected (FIG. 1B, step T1) and a crank pulse signal is detected during the abnormality (step T2). Therefore, a startup disablement indication can be determined without using the starter switch by using just the crank pulse signal and can be implemented using simple and inexpensive wiring.

Applicant notes that in prior art FIG. 2(A), a starter switch signal and crank pulse signal is inputted to the ECU and a start-up disablement indication signal is outputted from the ECU. However, as taught in FIG. 2(B), the start-up disablement indication signal is determined without the crank pulse signal by using the starter switch. Thus, the disclosure of the starter switch signal and crank signal input into the ECU in FIG. 2(A) simply teaches the input signal types and does not disclose or suggest how the start-up disablement indication signal is determined.

To clarify this distinction, independent claim 1 is amended to recite, "a startup disablement indication signal is determined when said crank pulse signal is inputted in the state that said abnormal condition is self-detected." AAPA, by contrast, determines the startup disablement indication signal from an abnormal condition and a starter switch.

Moreover, although the cited references have not been applied to the claims 1 and 2, applicant notes that the disclosure of these references do not remedy the deficiencies of AAPA. For example, Hozuka (US 6,067,009) is directed to a diagnostic apparatus for vehicles that transmits diagnostic results to an outside maintenance center (Abstract). Ohno is directed to diagnosis of a vehicle according to a running pattern for a vehicle certification check (col. 4, lines 27-38). Ishii (US 5,964,813) is directed to a vehicle diagnostic information storage system, and so forth. None of the cited references disclose or suggest applicant's startup disablement indication signal.

Since AAPA does not disclose each and every element of independent claim 1, it cannot anticipate that claim or claim 2 dependent thereon. The rejections under 35 USC 102 should be withdrawn.

Conclusion

This application is now believed to be in condition for allowance. The Examiner is invited to telephone the undersigned to resolve any issues that remain


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after entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

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